This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (original): A method of providing search results
2 in response to an ambiguous search query, the ambiguous
3 search query consisting of a sequence of ambiguous
4 information components:
5   receiving a sequence of ambiguous information
6 components from a user;
7   obtaining mapping information that maps the
8 ambiguous information components to less ambiguous
9 information components;
10   using the mapping information to translate the
11 sequence of ambiguous information components into one or
12 more corresponding sequences of less ambiguous
13 information components;
14   providing one or more of the sequences of less
15 ambiguous information as an input to a search engine;
16   obtaining search results from the search engine; and
17   presenting the search results to the user.

1 Claim 2 (original): The method of claim 1, wherein the
2 mapping information is based on the configuration of a
3 standard telephone keypad.

1 Claim 3 (original): The method of claim 2, wherein the
2 ambiguous information components comprise numbers and the
3 less ambiguous information components comprise letters.

1 Claim 4 (original): The method of claim 1, wherein each
2 of the ambiguous information components comprise a single

3 press of a key and the less ambiguous information

4 comprises letters that correspond to the key.

1 Claim 5 (original): The method of claim 1, wherein the

2 ambiguous information components comprise phonemes.

1 Claim 6 (original): The method of claim 5, wherein the

2 less ambiguous information components comprise

3 alphanumeric information.

1 Claim 7 (original): The method of claim 1, wherein the

2 ambiguous information components comprise visual

3 information.

1 Claim 8 (original): The method of claim 1, wherein the

2 act of using comprises using the mapping information in

3 combination with a lexicon to translate the sequence of

4 ambiguous information components into one or more

5 corresponding sequences of less ambiguous information

6 components.

1 Claim 9 (original): The method of claim 8, wherein the

2 lexicon is a dictionary.

1 Claim 10 (original): The method of claim 8, wherein the

2 lexicon is a list of sequences of less ambiguous

3 information components that previously have been

4 processed by the search engine.

1 Claim 11 (original): The method of claim 1, wherein the

2 act of providing comprises providing at least two

3 sequences of less ambiguous information components to the
4 search engine using a logical "OR" operation.

1 Claim 12 (original): The method of claim 11, wherein the
2 act of providing comprises:
3   determining a subset of the translated sequences of
4 less ambiguous information components; and
5   providing the subset of translated sequences of less
6 ambiguous information components as an input to a search
7 engine.

1 Claim 13 (original): The method of claim 12, wherein the
2 act of determining comprises comparing the translated
3 sequences of less ambiguous information components
4 against a lexicon.

1 Claim 14 (original): The method of claim 12, wherein the
2 act of determining comprises comparing the translated
3 sequences of less ambiguous information components
4 against a search query log.

1 Claim 15 (original): The method of claim 12, wherein the
2 act of determining comprises using statistical
3 information about the co-occurrence of the less ambiguous
4 information components within the sequence.

1 Claim 16 (original): A method of providing search
2 results in response to an ambiguous search query,
3 comprising:
4   receiving a sequence of information components from
5 a user, each information component corresponding to a key
6 press;

7   obtaining mapping information that maps the

8 information components to other information components

9 corresponding to the same key press;

10   using the mapping information to determine other

11 sequences of information components;

12   providing one or more of the received sequence and

13 the other sequences as an input to a search engine;

14   obtaining search results from the search engine; and

15   presenting the search results to the user.

1 Claim 17 (original): The method of claim 16, wherein the

2 mapping information is based on the configuration of a

3 standard telephone keypad.

1 Claim 18 (original): The method of claim 17, wherein the

2 received information components comprise numbers and the

3 other information components comprise letters.

1 Claim 19 (original): The method of claim 17, wherein

2 both the received and other information components

3 comprise letters.

1 Claim 20 (original): The method of claim 16, wherein the

2 act of providing comprises providing at least two

3 sequences to the search engine using a logical "OR"

4 operations.

1 Claim 21 (original): A method of providing search

2 results to a user in response to an ambiguous search

3 query, comprising:

4   receiving a string of numbers;

5   translating the string of numbers into a plurality

6 of letter strings based on mapping information;

7   providing at least one of the letter strings as a

8 search query to a search engine;

9   obtaining search results from the search engine in

10 response to the search query; and

11   presenting the search results to a user.

1 Claim 22 (original): The method of claim 21, wherein the

2 mapping information is based on a standard telephone

3 keypad.

1 Claim 23 (original): The method of claim 21, wherein the

2 act of providing comprises providing at least two of the

3 letter strings as a search query to a search engine using

4 a logical "OR" operation.

1 Claim 24 (original): A method of providing search

2 results to a user in response to an ambiguous search

3 query, comprising:

4   receiving a number word;

5   translating the number word into one or more letter

6 words based on mapping information;

7   providing at least one of the letter words as a

8 search query to a search engine;

9   obtaining search results from the search engine in

10 response to the search query; and

11   providing the search results to a user.

1 Claim 25 (original): The method of claim 24, wherein the

2 providing step comprises providing a plurality of the

3 letter words as a search query to a search engine using a

4 logical "OR" operation.

1 Claim 26 (original): A method of providing search

2 results to a user in response to an ambiguous search

3 query, comprising:

4   receiving at least two number words constituting a

5 number phrase;

6   translating each number word into one or more letter

7 words based on mapping information;

8   forming one or more letter phrases as a search query

9 to a search engine;

10   obtaining search results from the search engine in

11 response to the search query; and

12   providing the search results to a user.

1 Claim 27 (original): The method of claim 26, wherein the

2 providing step comprises providing at least two of the

3 letter phrases as a search query to a search engine using

4 a logical "OR" operation.

1 Claim 28 (original): The method of claim 26, wherein the

2 mapping information is based on a standard telephone

3 keypad.

1 Claim 29 (original): A method of providing search

2 results in response to an ambiguous search query received

3 from a client device, the ambiguous search query

4 consisting of a sequence of ambiguous information

5 components;

6   receiving at a server device a sequence of ambiguous

7 information components from a client device;

8   obtaining at the server device mapping information

9   that maps the ambiguous information components to less

10   ambiguous information components;

11   using the mapping information in combination with a

12   dictionary to translate, at the server device, the

13   sequence of ambiguous information components into one or

14   more corresponding sequences of less ambiguous

15   information components.

1   Claim 30 (original): A computer-readable medium

2   containing one or more instructions for providing search

3   results in response to an ambiguous search query, the

4   ambiguous search query consisting of a sequence of

5   ambiguous information components, the instructions

6   comprising:

7   receiving a sequence of ambiguous information

8   components from a user;

9   obtaining mapping information that maps the

10   ambiguous information components to less ambiguous

11   information components;

12   using the mapping information to translate the

13   sequence of ambiguous information components into one or

14   more corresponding sequences of less ambiguous

15   information components;

16   providing one or more of the sequences of less

17   ambiguous information as an input to a search engine;

18   obtaining search results from the search engine; and

19   presenting the search results to the user.

1   Claim 31 (original): An apparatus for providing search

2   results in response to an ambiguous search query, the

12

3   ambiguous search query consisting of a sequence of

4   ambiguous information components, comprising:

5   at least one memory having program instructions; and

6   at least one processor configured to execute the

7   program instructions to perform the operations of:

8   receiving a sequence of ambiguous information

9   components from a user;

10   obtaining mapping information that maps the

11   ambiguous information components to less ambiguous

12   information components;

13   using the mapping information to translate the

14   sequence of ambiguous information components into one or

15   more corresponding sequences of less ambiguous

16   information components;

17   providing one or more of the sequences of less

18   ambiguous information as an input to a search engine;

19   obtaining search results from the search

20   engine; and

21   presenting the search results to the user.

1   Claim 32 (original): An apparatus for providing search

2   results in response to an ambiguous search query, the

3   ambiguous search query consisting of a sequence of

4   ambiguous information components, comprising:

5   means for receiving a sequence of ambiguous

6   information components from a user;

7   means for obtaining mapping information that maps

8   the ambiguous information components to less ambiguous

9   information components;

10   means for using the mapping information to translate

11   the sequence of ambiguous information components into one

12   or more corresponding sequences of less ambiguous

13   information components;

14   means for providing one or more of the sequences of

15   less ambiguous information as an input to a search

16   engine;

17   means for obtaining search results from the search

18   engine; and

19   means for presenting the search results to the user.

1   Claim 33 (new):   The method of claim 1 wherein the act of

2   using the mapping information to translate the sequence

3   of ambiguous information components into one or more

4   corresponding sequences of less ambiguous information

5   components uses the mapping information to directly

6   translate the sequence of ambiguous information

7   components into one or more corresponding sequences of

8   less ambiguous information components.

1   Claim 34 (new):   The method of claim 1 wherein the

2   ambiguous information components are more ambiguous than

3   the less ambiguous information components due to a

4   limited capability of a user input device.

1   Claim 35 (new):   The method of claim 1 further comprising

2   looking up search results using an index including

3   entries, at least one entry including a sequence of less

4   ambiguous information components mapped to a set of one

5   or more items.